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Health hazards from British beaches?

Easter well past, the British public is now preparing for its summer holidays. Many will be heading for the polluted beaches of the Mediterranean, but others, hoping for a better summer than last year, will be holidaying at British coastal resorts. They, and anybody else who is planning a dip in the British briny, will be interested in two studies commissioned from a team at the University of Surrey by Greenpeace in the summer of 1987 and published in a report on *The Public Health Implications of Sewage Pollution of Bathing Water*.[1]

The first part of the report is concerned with public perceptions of beach and sea pollution and with the reporting of various symptoms by swimmers and non-swimmers. The resorts investigated were chosen on the basis of pre-existing microbiological data to provide contrasting levels of sea pollution: resort 1, "on the south west coast of England," had 40 times as many faecal coliforms as resort 2, "a small town on the south coast of England." Some 1900 people were interviewed, 1402 at resort 1 and 501 at resort 2. The respondents' perceptions of the cleanliness of the sea and beach were strikingly different for the two resorts and mirrored the microbiological assessments of pollution. Only 19% thought the sea was clean at resort 1 compared with 92% at resort 2. People at resort 1 reported significantly more debris both in the water and on the beach than those at resort 2. The items listed included discarded food or wrappings, bottles, cans, paper litter, dead fish and birds, oil slicks, human or animal excrement, and discarded condoms and sanitary towels. (Interestingly, overt filth seemed to correlate with microbiological filth.)

But does swimming in such polluted water cause illness? Swimmers at resort 1 were significantly more likely to develop stomach upsets, nausea, diarrhoea, or headaches than either non-swimmers at resort 1 or all holidaymakers at resort 2. Swimmers who had immersed their heads at resort 1 were most likely of all respondents to have reported gastrointestinal symptoms. (It is not stated how many head immersions took place or whether the respondents' mouths were open at the time.) Of course, and as the authors emphasise, this was not a controlled epidemiological study and its findings do not prove a causal link between swimming in polluted water and illness.

The second part of the report concerns the intensive monitoring of seawater in four coastal areas: Kent/Essex, Fylde, Cornwall, and Yorkshire. Twenty seven resorts were monitored twice daily for 10 days, a sampling frequency considerably above the minimum stipulated by the 1975 European Community directive on bathing water. This requires a faecal coliform standard of <2000/100 ml for 95% of samples during the entire bathing season, and member countries were expected to comply with this directive within 10 years. The European Community standard was apparently based on that of the United States Environmental Protection Agency, although it is considerably less exacting. Only 10 of the 27 British resorts investigated by Greenpeace met European Community standards over the sampling period and only 5 met American standards. The Cornish coast was the cleanest, and Fylde the most polluted: all eight of the resorts sampled on the Fylde coast failed to meet European Community standards, and Grannies Bay had the highest faecal coliform count (93 600) of all 27 resorts.

In 1959 the Public Health Laboratory Service averred that "Bathing in sewage polluted sea water carries only a negligible risk to health, even on beaches that are aesthetically very unsatisfactory."[2] The introduction of European Community legislation on bathing water challenges this view and rightly so. A clean up of British beaches is long overdue. Meanwhile, Cornwall might be the best bet for this year's holiday.

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Anogenital papillomavirus infection in children

Genital warts in adults are sexually transmitted and have an incubation period of up to several months.[1] Concurrent anal warts may occur in both sexes, but warts confined to the anus are commoner in men, particularly if they have anoreceptive intercourse.[2] Hybridisation studies show that anogenital warts in adults usually contain sequences of human papillomavirus types 6 or 11, but occasionally they contain type 16 or others.[3] A few patients develop genital warts that look like common skin warts, but the viral sequences in these have not been identified.

We know much less about anogenital warts in children because only a few cases have been recorded with adequate clinical and virological data. Most of the warts are either vulval or perianal, and analogy with the adult disease suggests that the responsible virus may be sexually transmitted. Doctors in the United States believe that most cases in children result from sexual abuse.[4] But this is not the only explanation of the warts' pathogenesis. Viruses may be